United States Department of the Interior

BUREAU OF LAND MANAGEMENT
RICHFIELD DISTRICT OFFICE
150 EAST 900 NORTH
RICHFIELD, UTAH 84701

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

3809
(U-052)

May 11, 1990

M/023/003

Mr. Leland J. Davis, Chief Geologist
Brush Wellman Inc.
67 West 2950 South
Salt Lake City, Utah 84115

Dear Mr. Davis:

We have completed our review of your modification to your Plan of Operations. This modification is for the development of the Roadside/Fluro and the Section 16 North No. 1 pits at Brush Wellman's Topaz Mining Property. This modification is approved as submitted, thus mining operations can begin on these pits. A copy of the Environmental Assessment which we prepared as part of the permit review process is enclosed for your records.

Approval of this modification to your Plan of Operations will not now, nor in the future, serve as determination of the validity nor ownership of any mining claim included under your Plan of Operations.

It is our understanding that you have agreed to prepare annual reports on the status of reclamation on this mining property and submit these reports to the State of Utah. It would be quite helpful to us if we could also receive a copy of this report. Monitoring the progress of your reclamation activity over the long term is the most effective way to assure the long term success of this activity.

Thank you for your cooperation during this permit review process.

Sincerely,

For Jerry Goodman
District Manager

Enclosure:
As Stated Above

cc:
Holland Shepard, Utah Division of Oil, Gas and Mining
HRRA

DECISION RECORD AND FONSI
EA No. UT-050-090-079
ROADSIDE/FLURO NO.3 AND SECTION 16 NORTH NO.1 PITS
BRUSH WELLMAN MINE EXTENSION
TOPAZ MINING PROPERTY, JUAB COUNTY, UTAH

FONSI: The impacts of this action are not significant and, therefore, an environmental impact statement is not required.

DECISION: Approve the amendment to the Plan of Operations Submitted by the Brush Wellman for those portions of the proposed action which would occur on federal land. Most of the Section 16 North No. 1 pit is on state land, however a portion of this pit and the associated waste dump occurs on federal land.

RATIONALE: Although the mining activity will remove an additional 50 acres of productive vegetation and use of this land as wildlife habitat and for livestock grazing for a period that is projected to last for 20 years, the reclamation activities committed to by the Operator will result in effective reclamation of the area to be disturbed. The mine will also provide economic benefits to the local and national economy.

MITIGATION: No additional mitigation is proposed. Brush Wellman is pursuing activities which should lead to the successful reclamation of their mining operation.

Brush Wellman will be required to submit to the Bureau of Land Management a copy of their annual reclamation report prepared for the State of Utah, Division of Oil, Gas and Mining.

APPROVED BY:

Rex Rowley

Rex Rowley, House Range Area Manager

5-9-90
Date

EA Number: UT-050-090-079
Serial Number: UT-056-2P

House Range Resource Area
Richfield District Office

Roadside/Fluro No. 3 and Section 16 North No. 1 Pits
Brush Wellman Mine Extension
Topaz Mining Property, Juab County, Utah

Team Leader:

Philip Allard, Geologist

Participating Staff:

Larry Sip, Realty Specialist
Harvey Gates, Supervisory Range Conservationist
Brent Crosland, Range Technician
Paul Briggs, Range Conservationist
Lynn Fergus, Outdoor Recreation Planner
Mark Pierce, Wildlife Biologist

Reviewed By:

Mark Pierce, Area Coordinator — Date: 8 May 90

Approved By:

Rex Rowley, Area Manager — Date: 5-9-90

A. INTRODUCTION

This Environmental Assessment (EA) is being prepared on two pit extensions proposed for the Topaz Mining property operated by Brush Wellman, Inc. The Topaz Mining property has been in continuous operation since 1968. This is prior to the passage of the National Environmental Policy Act of 1969 (NEPA), the Federal Land Management and policy Act of 1976 (FLPMA) and the adoption of the Surface Management of Mining Claims Regulations (43 CFR 3809, effective date January 1, 1981).

This EA addresses only the two pit extensions and does not address the entire mining operation. The Topaz Mining Property includes about 1,800 acres of land. five separate open pits have been developed to date. About 1,200 acres are federal lands. The mine operates on mining claims. The proposal under consideration here will effect about 50 acres of federal land within the 1,800 acre project area. In some cases the entire mine will be discussed in order to more clearly describe the context in which the Proposed Action would occur.

A typical pit is developed in stages. In the first stage, drilling on 100 foot centers is used to identify the ore body. Next, topsoil is removed if it is available. The overburden, which is a rhyolite, is shot with explosives and removed with loaders and trucks. Overburden is removed until about 7 feet of overburden remains over the ore. The ore is then drilled again, this time on 25 foot centers. This is necessary because the ore has no effect on the visual appearance of the rock and must be identified using geophysical techniques. The ore is then removed and stockpiled. The ore can be blended if needed before it is hauled to the mill located outside of Delta, Utah. The ore zone is in a mineralized material which is soft enough to rip with a bulldozer and remove with a scraper. Pits will remain open until all the ore is removed and overburden from the development of other pits is available to fill them. In certain cases the base of the highwall may provide access to underground minable reserves. In these cases the mining claimant will want the pit to remain open. Leaving a pit open in such a situation would enhance the ultimate recovery of beryllium from this property.

Need for the Proposed Action

The Proposed Action is needed to allow for the development of some Beryllium bearing ore materials. These ore materials have been identified through detailed drilling by the mining claimant. Beryllium is a light-weight, high-strength metal used in a wide variety of high technology and defense applications. The Topaz Mountain property of Brush/Wellman is the only producing domestic source of this metal.

Conformance with Land Use Plans

The mine and the associated mill is one of the major employers in Juab and Millard Counties, Utah. The area potentially affected by the Proposed Action was covered in the Resource Management Plan prepared for the House Range Resource Area. This plan was approved on October 28, 1987. The Proposed Action conforms with this plan. Environmental Assessment Record UT-050-81-70, dated July 1, 1981, was prepared for the original mining operation when the 43 CFR 3809 regulations became effective. This Environmental Assessment Record is incorporated by reference.

Relationship to Statutes, Regulations, or Other Plans

The Proposed Action is a significant modification to a Plan of Operations filed pursuant to 43 CFR 3809.1-7. These regulations were promulgated in order to implement the provisions of FLPMA which require the Secretary of the Interior to prevent the unnecessary and undue degradation of the public land (43 USC 1701 et. seq.).

Brush Wellman has already received the approval for the construction of these two pits from the Utah Division of Oil, Gas and Mining. The approval of Brush Wellman's modification to the Plan of Operations by the BLM is all that remains for them to complete their permitting process.

B. PROPOSED ACTION AND ALTERNATIVES

Proposed Action

Brush Wellman proposes to open two new pits starting in July of 1990. The Roadside/Fluro No. 3 pit is located immediately adjacent to the existing Roadside pit in T. 13 S., R. 12 W., Section 8. The Section 16 North No. 1 pit is located immediately adjacent to Blue Chalk South No. 1 pit in T. 13 S., R. 12 W., Section 9 and 16. The Roadside/Fluro No. 3 pit will disturb about 17 acres. Most of the overburden will be used to backfill the existing Roadside pit. After overburden is removed, the ore will be stripped and stockpiled on ground that has been previously disturbed. The ore will be moved from this stockpile as it is needed to feed the mill, which is located near Delta, Utah. The ultimate pit depth will be about 300 feet. The highwall will be surrounded with a berm that will prevent accidental access to the pit. The pit will be left open until excess overburden is available from subsequent pits for backfilling. The base of the highwall may provide access to ore for an underground mine. Reclamation of this site will be completed in 2010.

The Section 16 North No. 1 pit will be mined in the same manner as the Roadside/Fluro No. 3 pit except that the overburden removed will be stored on the surface rather than used to backfill an existing pit. Approximately 20 acres of BLM land will be disturbed by this mining activity. This pit will be approximately 150 feet deep when it is completed. This pit will ultimately be backfilled with overburden from other pits and will not remain open for access to underground minable reserves. Reclamation of this site will be completed in 2009.

No Action Alternative

In the No Action Alternative the amendment to the Plan of Operations would be rejected. The BLM may not absolutely forbid mining of, or totally bar access to, a valid mining claim (Southwest Resource Council, 96 IBLA 105, 120 (1987)). In order to accept the No Action Alternative, BLM would have to show that the claims proposed for mining are not valid and contest the claims. There presently is no basis to suspect that the claims proposed for mining are not valid. In this case it is appropriate to assume that the claims are valid.

C. AFFECTED ENVIRONMENT

1. General Setting

The Topaz Mining property is located in the Thomas Mountains - Tintic Mountains subdivision of the Basin and Range Physiographic Province at an elevation of 4,600 to 5,00 feet. The climate is cool continental and very arid with a net evaporation loss. Annual precipitation is 6-8 inches. Most precipitation comes as spring rains and summer showers, consequently the growing season is confined to the late spring and intermittent summer periods.

As a result of the low precipitation and small watershed areas of natural drainages in the mine area, all drainages are ephemeral. Other than water accumulated by runoff in the mine pits and minor accumulations that occasionally occur after major rainfall events behind dumps blocking drainages, there are no surface water impoundments in the area.

2. Affected Resources

a. Atmospheric Resources

The air quality is generally good. Under certain conditions, fugitive dust can generate local air quality problems. This generally occurs during dry weather near unimproved and gravel surfaced roads.

b. Topography

The mine site is located on the west side of Spor Mountain which is the western extension of the Thomas Range. Slopes on the mine site are generally moderate.

c. Water Resources

There are no perennial surface water resources in the area proposed for mining. Some surface runoff collects in the Roadside Mine. This runoff is used by livestock operators to water sheep. Although the roadside pit is about 300 feet deep, it has not intercepted any groundwater resources. Pits and dumps have been designed to properly impound or divert storm runoff in those locations where the pits or dumps intercept ephemeral drainages.

d. Soils

The soils in the area of the mine have been characterized into two relatively broad groups based upon their utility in reclamation. Stoney soils are residual soils which have formed by weathering and show evidence of natural erosion. These soils are generally shallow and have large amounts of coarse fragments in their horizons. They commonly have zones of lime accumulation in their profiles.

Alluvial soils are soils which show evidence of accumulation through the deposition of material in their profiles. They tend to be of finer texture than the stoney soils. They are also considerably deeper.

Alluvial soils are suitable for use in reclamation, but stoney soils have many factors which limit their suitability for use in reclamation. Both of these proposed pits are in areas of stoney soils.

e. Vegetation

There are no known threatened or endangered plant species in the area proposed for mining. Two plant communities and one ecotone (transition zone) have been recognized on the property (Jarvis, 1985). These plant communities generally correlate with the soil groups described above.

The Foothills Shrub/Grass Community has about 40% vegetative cover. The grasses are dominantly galleta Hilaria jamesii and bluebunch wheatgrass Agropyron spicatum. The shrub component is dominantly broom snakeweed Gutierrezia sarothrae and spiny horsebrush Tetradymia spinosa. The grasses will be dominant as the community reaches an undisturbed climax seral stage. Shrubs tend to increase with grazing pressure (Jarvis, 1985). This plant community tends to correlate with the Stoney soil group.

The Alluvial Slopes Shrub/Grass-Forb Community has about 25% vegetative cover. Shadscale Atriplex confertifolia and spiney horsebrush are the dominant shrub species. Galleta and cheat grass Bromus tectorum are the dominant grasses. The forb component of the community is composed of Halogeton glomeratus, Lepidium perfoliatum, and Sphaeralcea grossulariaefolia. The presence of the cheat grass and the halogeton indicate that the area is not at climax seral stage.

The ecotone shares plant species with the adjacent plant communities. The diversity of the overstory increases in the ecotone, and bluebunch wheatgrass is absent. Plant cover is about 30%.

f. Wildlife Resources

No threatened, endangered, or sensitive animal species are known to be resident at the site of the proposed mine. Mule deer, antelope and chukar may occur or migrate through the area. Other wildlife species which occur at the site include rabbits, coyote, mice, various birds and reptiles.

g. Visual Resource Management

The area is within Visual Resource Management Class IV. Although a project may be in contrast with the surrounding landscape, it still must repeat the basic elements of line, form, color and texture.

h. Archeological Resources

There are no known archeological sites or resources in the area proposed for disturbance. A cultural resource inventory was completed on April 10, 1990. The report of this inventory is shown as Attachment A to this EA.

i. Wilderness Resources

None of the land proposed for disturbance is within or nearby a Wilderness Study Area or a designated Wilderness Area.

j. Land Use

The area has historically been used for mining exploration and livestock grazing. Mines have been worked in the vicinity at various times over the past fifty years. The principal livestock use is sheep grazing during the winter.

k. Livestock Grazing

The site proposed for mining is within the Spor Mountain livestock allotment. This allotment contains 53,053 acres of federal land. The allotment is used for sheep and the period of use is from November 1 through April 30. The active preference is for 2,750 Animal Unit Months (AUMs). An AUM is the amount of forage needed to sustain five sheep for one month. This allotment has been classified as a maintenance allotment.

D. ENVIRONMENTAL CONSEQUENCES

1. Proposed Action

a. Environmental Impacts

(1). Atmospheric Resources

The mining operation would generate dust during mining and the hauling of ore. Some emissions would also occur from vehicles.

(2). Topography

Over the life of the mine there will be the permanent disposal of some of the waste rock on the surface. This is required by the mine design. At the end of mine life some of the pits will be left open. The Roadside/Fluro No. 3 pit will be left open to provide access to underground minable reserves. The Section 16 North No. 1 pit will be backfilled and regraded. These alteration

to topography will exist at the end of mine life. Any remaining highwall would be bench terraced and left in a stable condition. The waste rock dumps left on the surface would have level tops and a slope of about 1:1 on the sides. This would have an unnatural appearance even after the reestablishment of perennial vegetation.

(3). Water Resources

There would be no impact to water resources.

(4). Soils

The Alluvial soils would be salvaged and respread during reclamation. The Stoney soils would not be salvaged and would be lost during mining. the reclamation practices planned would be successful in reestablishing the productivity of most of the reclaimed surfaces. In a few areas the productivity of the post reclamation surface would be less than the premining productivity. This is because there is not enough available topsoil to respread topsoil on the entire area to be effected by mining. In areas where topsoil is unavailable, rhyolite would be used as a top dressing. This has proven to be a more appropriate plant growth material than any of the other materials available at the site.

(5). Vegetation

The existing vegetation would be removed during mining. After reclamation, a similar plant community would be established on all but those relatively small areas which did not receive and application of topsoil. In areas where the rhyolite is used the mine has be successful in establishing some grass plants and some shrubs. The productivity of these areas is somewhat less than the undisturbed surface.

(6). Wildlife Resources

Some wildlife would be displaced from the area to be mined. This is because of the loss of habitat. Displacement of wildlife because of the presence of activity is not anticipated because the area has been under development for about 22 years. The activities proposed here would be of the same type and intensity as the activity that has occurred for the past 22 years.

(7). Visual Resource Management

In order to meet Visual Resource Management Class IV objectives the project must conform to the surrounding landscape. This will require a minimum of 3:1 slopes on dump areas and the highwall. Without this impacts to visual resources will occur.

(8). Archeological Resources

There would be no impacts to archeological resources as a result of the proposed mine project. If an archeological resource is encountered during mining, the operator is required by regulations to cease operation and notify the BLM (43 CFR 3809.2-2(e)).

(9). Wilderness Resources

There would be no impact to wilderness resources as a result of the proposed mining activities.

(10). Land Use

This project would permit this mine and mill to remain a major employer in Millard and Juab counties. Some livestock use may be displaced to other locations for the life of the mining activity.

(11). Livestock Grazing

The entire area affected by Brush Wellman's mining activity is about 2% of the Spor Mountain Allotment. As many as 62 AUMs could be effected by the entire mining project for the life of the mine. The mining operator allows livestock operators to use water collected in water retention structures for erosion control. This benefit could offset the impact to forage availability. The Bureau of Land Management is currently charging $1.81 per AUM.

b. Mitigating Measures

No additional mitigating measures are proposed for this plan. The climate in this area is especially difficult for reclamation. The operator is working to develop successful reclamation procedures.

The Operator has agreed to submit annual status reports on their reclamation activities to the State of Utah, Department of Oil, Gas and Mining (DOGM). A copy of these reports should be submitted to the Bureau of Land Management (BLM) as well. This will provide to the agency the ability to monitor these activities. In this monitoring program, the BLM should take the opportunity to encourage the Operator to adopt new technologies as they become available.

c. Residual Impacts

The ore that would be mined would be removed. Productivity of the vegetation would be reduced for the duration of the project and the length of time needed for complete reclamation. Some dust would be emitted. Impacts to Visual Resources would occur where the dump slopes were reclaimed to angle of repose slopes and also where pits are left open for access to underground minable reserves.

In the opening of the mine overburden was generated which required disposal on the surface. This will remain at the end of mine life as will some excavations which will be left open to provide access to potentially underground minable reserves.

2. No Action Alternative

Under the No Action Alternative many of the impacts described above would still occur. This is because mining has been going on at the site for the past 22 years. Also, at this time there is no legal basis for accepting the No Action alternative.

CONSULTATION AND COORDINATION

Leland J. Davis, Brush Wellman
D. Wayne Hedberg, DOGM
Holland Shepard, DOGM

REFERENCES CITED

Jarvis, J. M., Plant Communities on Brush Wellman, Inc.'s Topaz Mining Property, J.B.R. Consultants, Salt Lake City, September, 1985.

Brush Wellman, Inc., Topaz Mining Property Reclamation Plan, J.B.R. Consultants, Salt Lake City, May 1988.

Project No. U-90-BL-100b,s

U.S.
Department of Interior
Bureau of Land Management
Richfield District Office
Summary Report of
Inspection for Cultural Resources

1. Report Title: Brush-Wellman Pit Extensions
2. Development Organization: Brush-Wellman Mining
3. Report Date: 04/10/90 Inventory Date: 03/23/90
4. Resource Area: House Range RA County: Juab County

5. Fieldwork Location: Map Reference(s): U.S.G.S. Topaz Mtn. West 7.5 Min.
Secs. 08, 09, 10, 15, & 16, T. 13 S., R. 12 W.
Sec. __, T. __ _., R. __ _.
Sec. __, T. __ _., R. __ _.

8. Description of Proposed Project (Impacts): Existing pit extensions with with spoil from excavations to be placed in existing pits.

9. Examination Procedures: Traversed extension areas on foot.

10. Linear Miles Surveyed: _____
and/or
Definable Acres Surveyed: 200 acres
and/or
Legally Undefinable Acres Surveyed: _____

11. Inventory Type:
R = Reconnaissance
X I = Intensive
S = Sample

12. Description of Findings: No archaeological or historic sites were identified.

13. Number of Sites Identified: 0 14. Collection(?): N/A
15. Actual/Potential National Register Properties Affected (Site Nos.): None

16. Literature/Site Files Search (Location/date): Richfield BLM District Office 03/19/90

17. Conclusions/Recommendations: No historic properties were identified. Project is recommended to proceed as scheduled.

18. La Mar W. Lindsay
District Archaeologist

Attachment A

04/10/90

BLM 8100-3

April 10, 1990

Bureau of Land Management
Richfield District
Richfield

To: Rex Rowley, AM, HRRA

Attn: Phil Allard

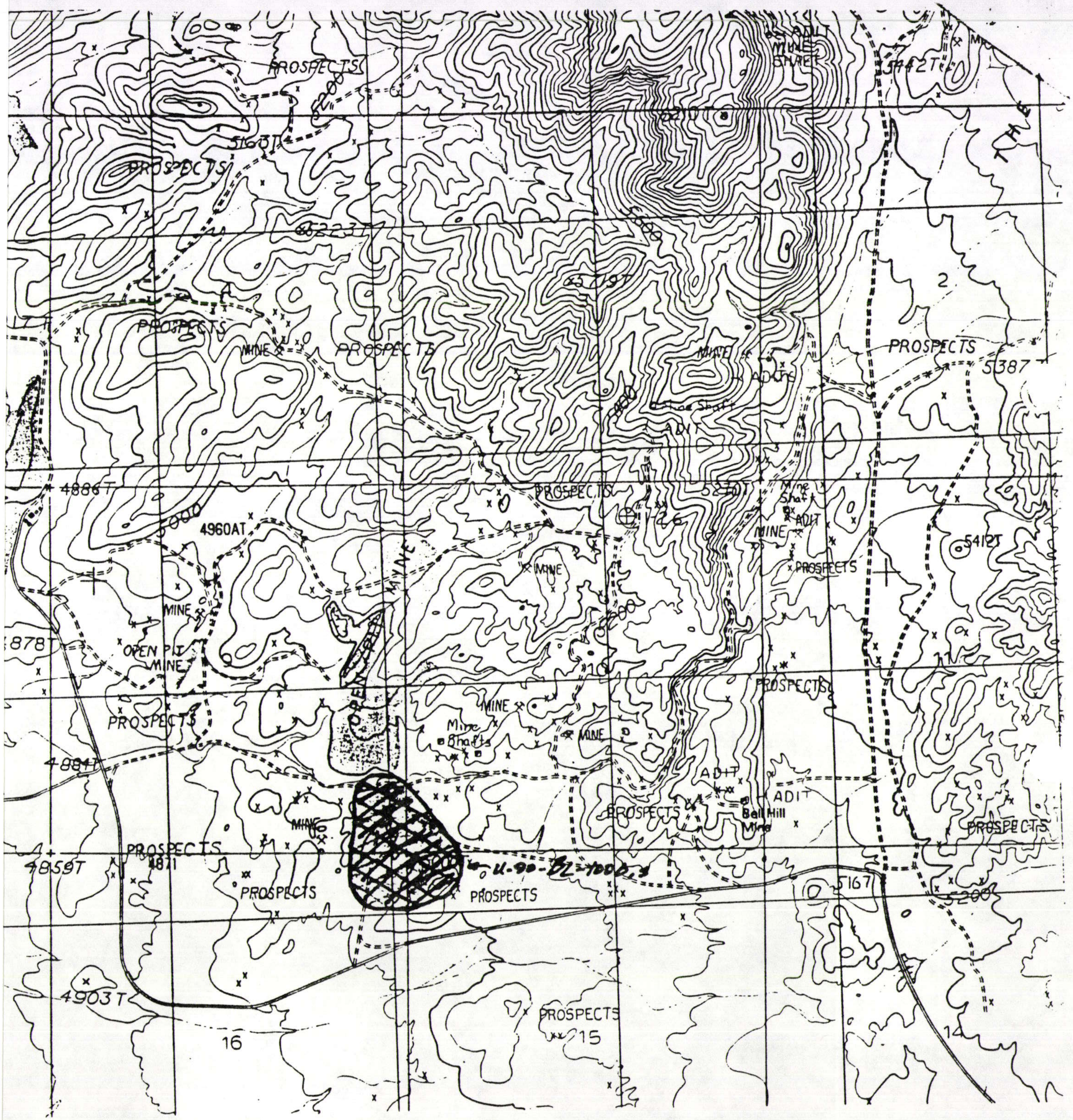
A Class III cultural resource inventory of the proposed Brush-Wellman Pit Extensions (U-90-BL-100b) project has been:

X conducted (see attached BLM 8100-3):

1) X No archaeological or historic sites were identified.
2) ___ No significant archaeological or historic sites were identified
3) ___ Nonsignificant archaeological or historic sites were identified (no historic properties).
4) ___ Significant archaeological or historic sites were identified and:
   a) ___ will be avoided (no historic properties).
   b) ___ will not be avoided. Appropriate data recovery is planned in consultation with Utah SHPO and the Advisory Council (no adverse effect).
   c) ___ will not be avoided. Data recovery is not possible (adverse effect). SHPO and the Advisory Council have been consulted.

La Mar M. Lindsay
District Archaeologist

cc: Wilson Martin, Deputy Utah SHPO



PROSPECTS
MINE
ADIT
MINE SHAFT
OPEN PIT MINE
OPEN PIT
Mine Shafts
Bell Hill Mine
5387
5412T
5167
5200
5160T
4960AT
4886T
4884T
4859T
4903T
4878T
4871
2
10
14
15
16

INTERDISCIPLINARY TEAM CHECKLIST

PROPOSED ACTION Brush Wellman Mine Ex. TEAM LEADER Philip Allard

DATE 4/4/90

Identify the important impacts created by the proposed action on your assigned resources. Also check the list below for critical elements.

CRITICAL ELEMENTS	AFFECTED YES	AFFECTED NO	INITIAL
Air Quality		✓	
ACECs		✓	
Cultural Resources[1]		✓	(PA)
Farmlands, Prime/Unique		✓	[illegible]
Floodplains		✓	
Nat. Amer. Rel. Concerns		✓	(PA)
T E & S Plants[1]		✓	
T E & S Animals		✓	
Wastes, Hazardous/Solid		✓	mp
Water Quality		✓	
Wetlands/Riparian Zones		✓	
Wild & Scenic Rivers		✓	mp
Wilderness	2	✓	(PA)
		✓	Z

Short Description of Impacts:[3]

Minerals This project would increase the recovery of Beryllium from this mine. Beryllium is a strategic mineral and this mine is the only domestic source

Lands No problem with the realty program [illegible] 5/8/90

Range Due to free water in pits and the fact that cattle and sheep tend to stay in the mine area when watering or grazing or – Suggest we fence. and slope banks where they drink. of [illegible] 5/8/90

Forestry No Problems Bor 5/8/90

Watershed Where would water blocked in drainages go–?

Recreation (VRM) Project will exceed VRM contrast Requirements

Wildlife Pre-existing disturbance to wildlife in the area [illegible]

Wilderness Values No impact. P. Allard

Cultural Resources/Paleontology See cultural clearance attached to EA

1 Attach Report
2 Use Form
3 Each team member should review the draft EA to be sure his/her section/data are correct.

Proposed Action: Name, Rush Wellman Mine Extension Location, T13SR12W Sec. 8, 9, 15, 16

Description The mine plans to expand the Roadside and Rainbow strip mines to a total expansion of 26 acres in new mines and about the same amount in new Dumps (on mine map the specific areas are the Roadside/Euro #3 and Sec 16 N. #1

Please identify the significant issues created by the proposed action on your resource, and state why the issue is significant. Initial and date your assessment.

Phil
Minerals: This project would increase the recovery of Beryllium from this mine. Beryllium is a Strategic mineral and this mine is the only domestic source of production. P. Allen 4/4/98

Larry
Lands: See attached team sheet.

Harvey
Livestock: See memo dated 3/18/98
Fence the dugs so livestock don't get into the mine areas where work is going on. Gates

Brent
Forestry: No Impact

Paul
Watershed: Water trapped in drainages should be allowed to flow past if there is no contamination.
BB.

Lynn
Recreation: The project will have no impact on Recreation or Wilderness Values. The fill Dump Slopes and stepped headwalls will exceed ~~BLM~~ VRM Contrast Requirements

Mark
Wildlife: See attached Memo team sheet

Level of Analysis and documentation of EAR intensity: This mine has been in continuous operation since 1968 (pre 3809 regulations). EAR # UT-050-81-70 was prepared on the project by Burbell Hinder on 7/1/81. This EA is to expand the coverage of that EA for expanded disturbance and new data made available since 81

Level of Public Interest: Few people other that competing miners, have shown much interest in this mining operation

Signature of Team Leader Phil Allen

CHECKLIST OF REQUIRED ELEMENTS FOR EA

	YES	NO	COMMENTS
1. Proposal in Conformance with MFP/RMP	✓		
2. Floodplains and Wetlands Adversely Affected		✓	
3. Water Resources Adversely Affected		✓	
4. Prime and Unique Farmlands Adversely Affected		✓	
5. VRM Classes Adversely Affected	✓		class III area contrast requirements exceeded by 1:1 slopes on waste dump
6. Aquifers Adversely Affected		✓	
7. Rivers and Harbors 404 Permit Required		✓	
8. Paleontological Resources Adversely Affected		✓	
9. T & E (or sensitive) Plants and/or Animals Adversely Affected		✓	
10. Wilderness Values Adversely Affected		✓	
11. Cultural Resources Adversely Affected		✓	
12. Air Quality Adversely Affected		✓	
13. Wild and/or Scenic River(s) Adversely Affected		✓	
14. ACEC Involved		✓	
15. T & E Plant Clearance Done	✓		
16. T & E Animal Clearance Done	✓		
17. Cultural Resource Clearance Done	✓		

I certify that the above elements have been evaluated and the checklist is complete and accurate as shown.

Lee Lowley
Area Manager

5-9-80
Date

THREATENED ENDANGERED AND SENSITIVE SPECIES

Date May 7, 1990 Examiner Paul Briggs

Project Name Brush Wellman Pit Extentions

Project Location T.13.S R.12.W Sec(s)08 , 09 , ____1/4, ____1/4
T.13.S R.12.W Sec(s)10 , 15 , ____1/4, ____1/4
Elevation 4700 Feet Geology _____

SWA# _____ Vegetative Type Salt/Desert Shrub

Description of Field Work Literature search of Fillmore BLM library.

Reference Sources Utah's Rare Plants Revisited : (Welch et al. 1985) Great Basin Naturalist.

General Comments _____

Threatened, Endangered or Sensitive Species: YES _____ NO X

(List, if Yes) _____

Species Collected on Site _____

Species Observed on Site _____

Potential Impacts on Species From The Project: _____

(Signature of Inspector) Paul N. Briggs

THREATENED ENDANGERED AND SENSITIVE SPECIES

Date 2 April 1990 Examiner Mark Pierce

Project Name Topaz Mountain Pit Extension

Project Location T. 13 S R. 12 W. Sec(s) 8-15 , 1/4, 1/4

Elevation 5200 feet Geology Mtn and Ridges

SWA# Vegetative Type Salt desert shrub

Description of Field Work None

Reference Sources HRRA RMP and EIS September 1986

General Comments The project will not adversely impact T&E or Sensitive species in the area.

Threatened, Endangered or Sensitive Species: YES NO X

(List, if Yes)

Species Collected on Site Site was not visited.

Species Observed on Site

Potential Impacts on Species From The Project None

(Signature of Inspector)